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14. ABSTRACT

This study is designed to examine the extent to which combat driving behaviors and anxieties are carried-over into driving on American roads post-deployment from service in Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn (OEF/OIF/OND) and to compare such behaviors in Service Members (SMs) who have and have not served in these combat operations and who do and do not have mild traumatic brain injury (mTBI). The study has struggled to gain access to subjects. The PI has increased her ORISE Faculty Fellowship time at the newly named Rehabilitation and Reintegration Division (R2D) to .5FTE in hopes that this networking may assist search for partners, and has followed-up with all site possibilities. One site possibility for Marines, and one for Army were obtained through this network. None have yet been brought to fruition. No data has been gathered; and no findings to report. Efforts by the CDMRP in September of 2010 have uncovered a highly motivated site and may bear fruit in 2011.

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INTRODUCTION: Service Members (SMs), especially Soldiers, serving in Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) (and newly Operation New Dawn (OND)) use combat driving maneuvers to avoid roadway threats. These become automatic as they are performed repeatedly and strongly linked to safety. A regional pilot study by the PI and graduate students (Riley-Chiabotti, Hieb, Welle, Stern, 2008; Stern, 2009; Christensen, Escobar, Riess, Stern, 2009) indicated that post-deployed Soldiers may have high levels of carryover behaviors and anxieties and that these behaviors are long lived issues – lasting for several months post-deployment. Reflecting Killgore, Cotting, Thomas, et al's. (2008) finding that general combat trauma influences risky behaviors post-deployment (including risky driving), driving carryover behaviors and anxieties regressed significantly on the level of Soldiers' OIF/OEF driving-related trauma (Polzin, Wenker, Stern EB, 2009). The current CDMRP study builds upon these findings, using a drop-off-mail-back survey to provide firm national data on the scale, incidence, and timeline of combat-driving behaviors among post-deployed Soldiers with and without mild traumatic brain injury (mTBI) or mTBI with post-traumatic stress syndrome (mTBI/PTSD), and compares Post-deployment Soldiers to Soldiers who have not served in OEF/OIF/OND. The study's goals are to determine the extent to which combat driving tendencies are carried over into post-deployment driving on American roads by Soldiers with mTBI and those without mTBI, to separate driving behaviors associated with military service from those associated with brain injury or deployment, to examine the impact of dual diagnosis of mTBI/PTSD on driving carryover, and to establish military respondents' self-recognition of driving behaviors relative to an informed third party report as a measure of self-awareness. Further, the study compares the responses of survey participants in the three strata mentioned above with a *Knowledgeable Other* (i.e., *Family/Friend* identified by the military respondent as someone who has been a passenger when the service member drove). The ultimate purpose of the study is to describe behaviors and needs to allow appropriate post-deployment program development for Soldiers, families, and communities.

BODY:

Project work is at Task 1 'Obtain IRB approval', although the effort is not so much centered on IRB applications, as it is on recruiting collaborating commanders and sites that will allow access to invite participation of Service Members (SMs). The original project methodology proposed a database derived mailed survey. When funded, CDMRP staff informed us that such a database was not available for our use, and that an alternative method was needed. Thus the project was altered to be one of a drop off-mail/phone return. As such, the study relies on access to sites with SMs who have and have not served in OIF/OEF/OND, and who do and do not have mTBI. Gaining this access has been more problematic than anticipated. In furtherance of the goal, over the past year (2009-2010) we have continued to pursue all site contacts from CDMRP and others (total of 5 site possibilities), requested change in IRB status (from Expedited to Exempt) by University of Minnesota IRB (request denied; the project remains approved at expedited level), further refined SM and Family/Friend surveys, and increased ORISE Faculty Fellowship at Rehabilitation and Reintegration Division (R2D) to increase networking opportunities.

KEY RESEARCH ACCOMPLISHMENTS:

- The project has been unable to gain access to SMs for the national survey, although at the end of this period the CDMRP's efforts at one site, and R2D contacts at 2 others appear to have strong interest.

REPORTABLE OUTCOMES:

In our ongoing efforts to gain access to subjects, we have capitalized on every opportunity, including those primarily involved with other military research or program development. No sites have been established in the 2009-2010 year, but.

- **Post-deployment driving brochures** for SMs and Family developed as part of an OT Master's project were accepted with editing, by R2D – and posted on both their website and that of the Army's Safety Center's website. See Soldier materials at http://www.amedd.army.mil/prr/Post-Combat_Driving_for_Soldiers.pdf and Family/Friends at http://www.amedd.army.mil/prr/Post-Combat_Driving_for_Families.pdf
- **Publication:** Working Group (Blankenship J, Bleiberg J, Cozzarelli T, Davis E, Digman G, Erickson M, Franklin A, Hastings A, Helmick K, Hopewell A, Lew H, Miller C, Myatt C, Novack T, O'Toole J, Phipps T, Powell H, Scholten J, Schultheis M, Sconiers S, Singer K, Soderstrom C, Springer B, St. Laurent M, Stav W, Stern EB, Vaughter J, Wenninger W, Williams C) (2009) Defense Centers of

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- **Presentation:** Stern, E, Zola J, Radomski MV (2010) Driving Simulation 101: Driving simulation as a clinical tool (also to include orientation to OT-PT mTBI Toolkit). Sponsored by the Proponency Office for Rehabilitation and Reintegration (now Rehabilitation and Reintegration Division, R2D). Held at Sister Kenny Institute, Minneapolis, MN. Workshop (2 1/2 day)
- **Presentation:** Stern, E Chiabotti, L, Christensen E, Clair E, Day A, Escobar O, Hieb A, Polzin J, Riess J, Schleisman K, Wenker K, Center B. (2010). Shifting gears: Post-deployment driving behaviors and anxieties after military service in Iraq or Afghanistan. American Occupational Therapy Association, Orlando. 90 min short course
- **Presentation:** Erickson, M and Stern, E (2009). When Johnny and Jane Come Marching Home: Civilian OT's role in serving returning military personnel and their families. MOTA, Minneapolis, MN. 1 hr.
- **Research Poster:** Babulal G, Korpela C, Lane T, Schwartz A, Stern EB (2010 MOTA). Developing Soldier-Accepted Driving Resources for Post-Deployment Combat Driving Behaviors and Related Driving Anxieties. Minnesota Occupational Therapy Association (MOTA) Conference, Duluth MN
- **Primary International Poster:** Stern, E Chiabotti, L, Christensen E, Clair E, Day A, Escobar O, Hieb A, Polzin J, Riess J, Schleisman K, Wenker K, Center B. (2010). Shifting gears: Post-deployment driving behaviors and anxieties after military service in Iraq or Afghanistan. World Federation of Occupational Therapy Association, Chile. Primary Poster. *Reprinted at MOTA Conference(2010), Duluth, MN.*

CONCLUSION: We continue to work to access subjects for the current CDMRP study, and are hopeful that current efforts by the CDMRP Commander and Scientific Officer appear likely to gain a site for us in 2011.

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APPENDICES: None